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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,894

12/10/2003

Shoei Kobayashi

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EXAMINER

GOMA, TAWFIK A

ART UNIT

PAPER NUMBER

2627

NOTIFICATION DATE

DELIVERY MODE

09/12/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/733,894

Applicant(s)

KOBAYASHI, SHOEI

Examiner

Tawfik Goma

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 6, 8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-6 and 8-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the amendment filed on 6/13/2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, and 4-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heemskerk et al (US 6628584) in view of Sako et al (US 5901127) and further in view of Suzuki (US 6912191).

Regarding claim 1, Heemskerk discloses a reproduction-only recording medium wherein blocks having a main data area and a linking area are continuous with each other (figs. 3-4 and col. 4 lines 53-67) to form a data track by embossed pits (fig. 1b), the data track being divided into physical sector numbers (32, 34, 36, fig. 3 and col. 2 lines 11-17). Heemskerk fails to disclose main data recorded in said main data area and linking data recorded in said linking area in each of said blocks are scrambled by a random sequence scrambling data generated by an identical system. In the same field of endeavor, Sako discloses main data and linking data that are scrambled by a random sequence (col. 7 lines 51-57) by an identical system (fig. 1 and col. 4 lines 27-32). It would have been obvious to one of ordinary skill in the art to modify the recording medium disclosed by Heemskerk by scrambling the main data and header information with an identical system as taught by Sako. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to scramble the data

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in order to randomize the data and remove the same patterns in the data string (col. 18 lines 5-11).

Further regarding claim 1, Heemskerk in view of Sako fail to disclose wherein a cluster number is set as the initial value when data is scrambled. In the same field of endeavor, Suzuki discloses wherein a cluster number in at least one of the physical sector number in the data track is preset as the initial value when data is scrambled (col. 23 lines 66-67 through col. 24 lines 1-6). It would have been obvious to one of ordinary skill in the art to modify the medium disclosed by Heemskerk in view of Sako by providing the cluster number as the initial number for the shift register. The rationale is as follows: One of ordinary skill in the art would have been motivated to provide the cluster number as the initial number in order to use a seed number that is somehow associated with each sector to avoid using completely random initial seed numbers for the shift register.

Regarding claim 4, Sako further discloses wherein in each of said blocks, said linking area is formed on only a front end side of said main data area (fig. 7 and col. 6 lines 22-32). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the linking area in front of the user data area in order to enable synchronization during random access prior to reading of the specified user data area.

Regarding claim 5, Heemskerk further discloses wherein in each of said blocks, said linking area is formed on only a rear end side of said main data area (fig. 3).

Regarding claim 6, Heemskerk discloses a reproducing apparatus for performing data reproduction in correspondence with at least a reproduction-only recording medium in which medium blocks having a main data area and a linking area are continuous with each other to

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form a data track by embossed pits (figs. 1b, 2 and 3), the data track being divided into physical sector numbers (32, 34, 36, fig. 3 and col. 2 lines 11-17). Heemskerk further discloses said reproducing apparatus comprising: reading means for reading information from a recording medium loaded into the reproducing apparatus (22, 27, fig. 2); and decoding means for subjecting the information read by said reading means to data decoding processing (col. 4 lines 30-33). Heemskerk fails to disclose wherein main data recorded in said main data area and linking data recorded in said linking area in each of said blocks are scrambled by scrambling data generated by an identical system, and subjecting the reproduced data to descrambling processing for said scramble, and reproducing said main data and said linking data. In the same field of endeavor, Sako discloses main data and linking data that are scrambled by a random sequence (col. 7 lines 51-57) using an identical system (fig. 1 and col. 4 lines 27-32) and descrambling means for descrambling the data (fig. 22) wherein said decoding means subjects the information read by said reading means to said descrambling processing (fig. 19 and 22). It would have been obvious to one of ordinary skill in the art to modify the recording medium disclosed by Heemskerk by scrambling the main data and header information with an identical system and to descramble the reproduced scrambled data as taught by Sako. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to scramble the data in order to randomize the data and remove the same patterns in the data string (col. 18 lines 5-11).

Further regarding claim 6, Heemskerk in view of Sako fail to disclose wherein a cluster number is set as the initial value when data is scrambled. In the field of endeavor, Suzuki discloses wherein a cluster number in at least one of the physical sector number in the data track

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is preset as the initial value when data is scrambled (col. 23 lines 66-67 through col. 24 lines 1-6). It would have been obvious to one of ordinary skill in the art to modify the apparatus disclosed by Heemskerk in view of Sako by providing the cluster number as the initial number for the shift register. The rationale follows as in claim 1 above.

Regarding claim 8, method claim 8 is drawn to the method of using the apparatus of claim 6, therefore method claim 8 is rejected for the same reasons of obviousness as applied above.

Regarding claim 9, Heemskerk discloses a disk manufacturing method for manufacturing a reproduction-only disk recording medium (figs. 1a, 1b and claims 5 and 11), in which medium blocks having a main data area and a linking area are continuous with each other as a data track formed by embossed pits (figs. 1b, and 3), the data track being divided into physical sector numbers (32, 34, 36, fig. 3 and col. 2 lines 11-17). Heemskerk further discloses performing mastering using the data (fig. 1b and col. 1 lines 17-22). Heemskerk fails to disclose the steps of: scrambling main data recorded in said main data area and linking data recorded in said linking area by using scrambling data generated by a random sequence using address information of said block as an initial value. In the same field of endeavor, Sako discloses main data and linking data that are scrambled (fig. 1 and col. 4 lines 27-32). It would have been obvious to one of ordinary skill in the art to modify the recording medium disclosed by Heemskerk by scrambling the main data and header information as taught by Sako. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to scramble the data in order to randomize the data and remove the same patterns in the data string (col. 18 lines 5-11).

Further regarding claim 9, Heemskerk in view of Sako fail to disclose wherein a cluster number is set as the initial value when data is scrambled. In the field of endeavor, Suzuki discloses wherein a cluster number in at least one of the physical sector number in the data track is preset as the initial value when data is scrambled (col. 23 lines 66-67 through col. 24 lines 1-6). It would have been obvious to one of ordinary skill in the art to modify the apparatus disclosed by Heemskerk in view of Sako by providing the cluster number as the initial number for the shift register. The rationale follows as in claim 1 above.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heemskerk et al (US 6628584) in view of Sako et al (US 5901127) and Suzuki (US 6912191) as applied to claims 1-2, and 4-6 and 8-9 above, and further in view of Kobayashi et al (US 6256276).

Regarding claim 3, Heemskerk in view of Sako and Suzuki fail to disclose wherein in each of said blocks, said linking area is formed on a front end side and a rear end side of said main data area. In the same field of endeavor, Kobayashi discloses a linking areas in front and behind the main data. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the medium disclosed by Heemskerk in view of Sako and Suzuki by providing linking areas in front and behind the main data as taught by Kobayashi. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide the linking areas in front and behind the main data in order to make the read-only disc compatible with readers for recordable discs that have the front and back linking areas (see Heemskerk abstract).

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-6 and 8-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tawfik Goma/
8/31/2007

/William R. Korzuch/

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